

DATA SHEET

THICK FILM POWER HEATER SERIE GBR-380/3

Description:

Thick film power heaters are produced by screen printing process. Noble metals, oxide noble metals, organic filler and solvents converted into conductivity, resistance pastes are used. These materials deposited on alumina (96% Al_2O_3) substrate by screen printing process, then firing in conveyer ovens. Thick film resistors after firing are adjusted to suitable tolerance.

Application:

Thick film power heaters series GBR-380/3 are used in home equipment

General specifications

Table 1

Parameter	Unit	Type		
		GBR-380/3 75W/230V	GBR-380/3 80W/230V	GBR-380/3 85W/230V
Nominal Power	W	75	80	85
Resistance	Ω	705,3	661,3	622,4
Tolerance of resistance	%	± 5		
Working voltage	V _{AC}	230	230	230
Limit working voltage	V _{AC}	253	253	253

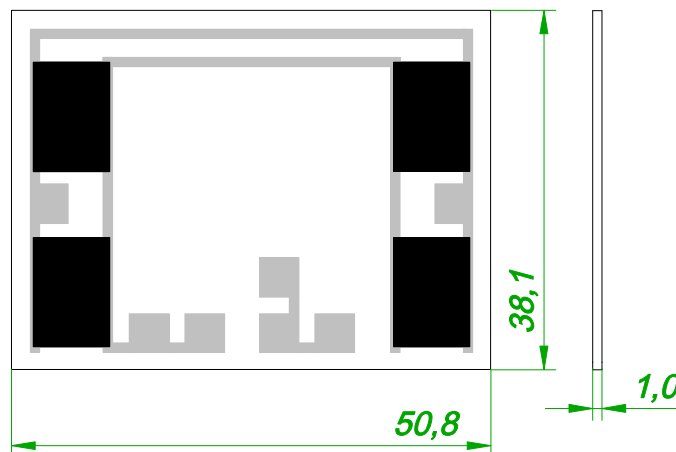


Fig.1. Outline view - dimensions

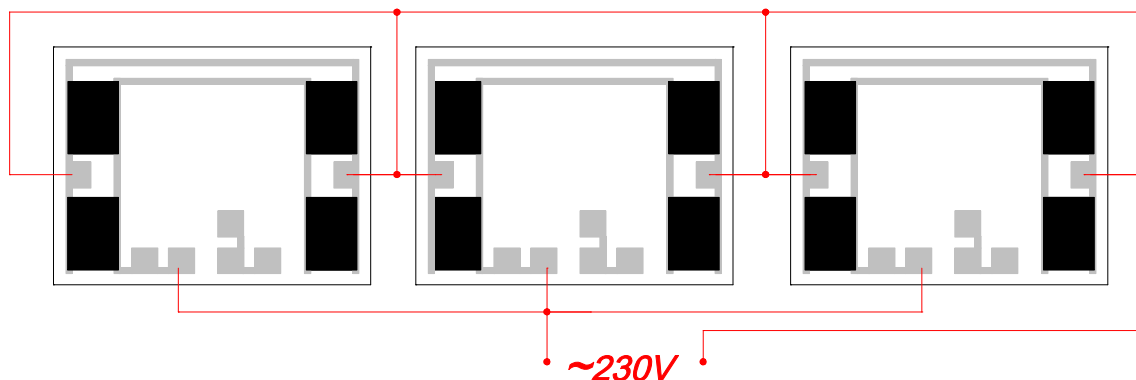


Fig. 2. Application of GBR-380/3 Heaters

Table 2

PARAMETERS OF THE THICK FILM GBR-380/3 75/80/85 W/230V HEATERS

Item	Parameter	Unit	Standard Value	Minimal Value	Maximal Value	Test requirements
Heater GBR-380/3 75W/230V						
1	Dimensions	[mm]	50,8x38,1x1,0			Accuracy $\pm 0,1$ mm
2	Heater Power	[W]	75	71,4	78,9	$T_{amb}=25^{\circ}C$; $R=R_{nom}$; $U=230V$
3	Operating Voltage	[V]	230			
4	Heater Resistance	[Ω]	705,3	670,1	740,6	$T_{amb}=25^{\circ}C$;
5	Temperature Coefficient of Resistance (TCR)	ppm/K	± 250			$T_{amb} = -25 \div +35^{\circ}C$;
6	Permissible Power of heater	[W]			95,5	$T_{amb}=25^{\circ}C$; $R=R_{min}$; $U=253V$
7	Operating Temperature Range	[$^{\circ}C$]	+ 25	-25	+ 35	
Heater GBR-380/3 80W/230V						
1	Dimensions	[mm]	50,8x38,1x1,0			Accuracy $\pm 0,1$ mm
2	Heater Power	[W]	80	76,2	84,2	$T_{amb}=25^{\circ}C$; $R=R_{nom}$; $U=230V$
3	Operating Voltage	[V]	230			
4	Heater Resistance	[Ω]	661,3	628,2	694,4	$T_{amb}=25^{\circ}C$;
5	Temperature Coefficient of Resistance (TCR)	ppm/K	± 250			$T_{amb} = -25 \div +35^{\circ}C$;
6	Permissible Power of heater	[W]			101,9	$T_{amb}=25^{\circ}C$; $R=R_{min}$; $U=253V$
7	Operating Temperature Range	[$^{\circ}C$]	+ 25	-25	+ 35	
Heater GBR-380/3 85W/230V						
1	Dimensions	[mm]	50,8x38,1x1,0			Accuracy $\pm 0,1$ mm
2	Heater Power	[W]	85	81	89,5	$T_{amb}=25^{\circ}C$; $R=R_{nom}$; $U=230V$
3	Operating Voltage	[V]	230			
4	Heater Resistance	[Ω]	622,4	591,3	653,5	$T_{amb}=25^{\circ}C$;
5	Temperature Coefficient of Resistance (TCR)	ppm/K	± 250			$T_{amb} = -25 \div +35^{\circ}C$;
6	Permissible Power of heater	[W]			108,3	$T_{amb}=25^{\circ}C$; $R=R_{min}$; $U=253V$
7	Operating Temperature Range	[$^{\circ}C$]	+ 25	-25	+ 35	

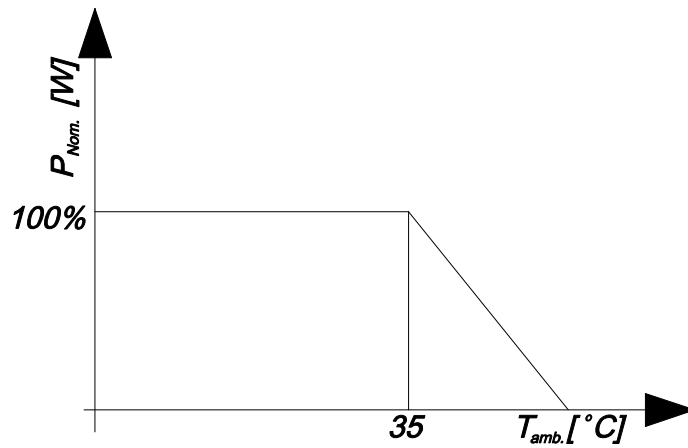


Fig.3. Output Power of GBR-380/3 Heaters dependence of ambient temperature

Marking:

Marking on resistance structure: None,

Marking on a packaging box:

Type of resistor: (example) GBR-380/3 80W/230V,

Manufacturing date (week/year): 27/10

Ordering example:

Heater GBR-380/3 80W/230V

Packing:

Heaters are packed in paper tape and cardboard boxes.